

# TRACS Technical Update

April 18<sup>th</sup> 2016

In April 2016, the TRACS team deployed a release that included some major fixes and system enhancements to improve TRACS usability, speed and performance. The update addressed the map server, GIS data, land record form, sensitive project designation as well as some other miscellaneous items.

Note: These updates (with the exception of the map server update) are currently available only in the production environment. The changes will be available in the training environment after the next production-training sync planned for late April, 2016.

Online reference materials have been updated to reflect the changes in this release. Please visit the TRACS Knowledge Management Site (KMS) for up-to-date information:

<https://tracs.fws.gov/learning/>

## Map Server

The map server in TRACS was upgraded to **ArcGIS 10.3** in all environments, including production and training. In addition to improving security by fixing known issues in the 10.0 version of ArcGIS, the new server is considerably faster, leading to dramatically improved rendering time in the TRACS application mapper.

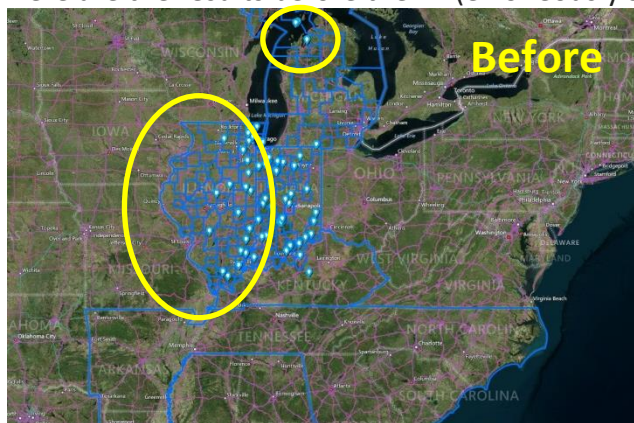
## GIS Data

The update improved the GIS (Geographic Information System) data and calculations used to determine the location of projects with respect to the four standard location layers: **FWS Region**, **U.S. State**, **U.S. County** and **U.S. Congressional District**. The update included both code and data fixes that will improve the system going forward, and also a behind-the-scenes recalculation of location for site-specific features to ensure the accuracy of current data.

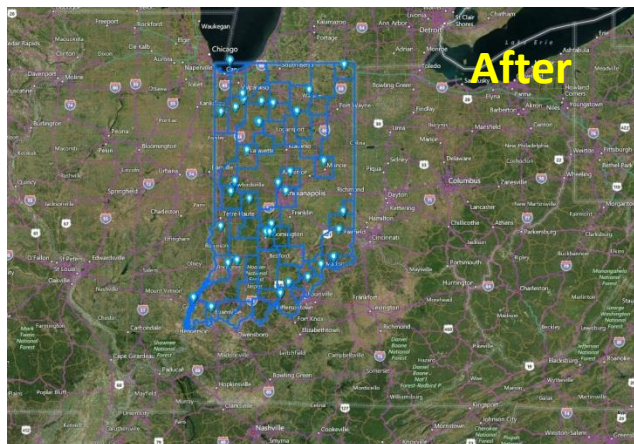
- **Location calculation for all site specific shapes is now much more precise and accurate.** The new data and calculations we use have a precision of 10 meters (compared to the previous 1,000 meter precision). This means that when entering site specific data near a political border, the system will calculate accurate location information such as indicating that a project is only in the county in which it resides and not in neighboring states or counties.
- **Location information when selecting multiple items from the Geopicker is now much more accurate.** This will dramatically reduce system calculation errors showing up as "erroneous counties".

- **Selecting multiple items from the Geopicker is now MUCH faster.** Previously selecting more than 2-3 big and/or coastal states would result in an error. It's now possible to select all 56 states and territories (and even bigger selections) quickly.
- **Selecting multiple items from the Geopicker now results in a shared shape.** Previously, the result of a multiple selection (e.g. multiple counties) in the Geopicker was a custom shape. A shared shape means that shapes used to represent common project boundaries, such as states, counties, watersheds, etc., are drawn once on the map but potentially represent many records. Shared shapes increase performance by reducing the number of shapes that are drawn on the map. This will be a significant improvement for users in identifying on screen shapes and what projects they represent, and mapper performance will improve as fewer on-screen shapes will be needed to represent projects.
- **Congressional Districts** have been updated to use the 114<sup>th</sup> Congress Data Set (instead of the 112<sup>th</sup>).
- **Improved Map Filter Accuracy.** It is no longer possible to create a broken map filter by deselecting the operation type (all or any). Map filters by "State" are now much more accurate. Below is an example of a filter for all Projects in Indiana.

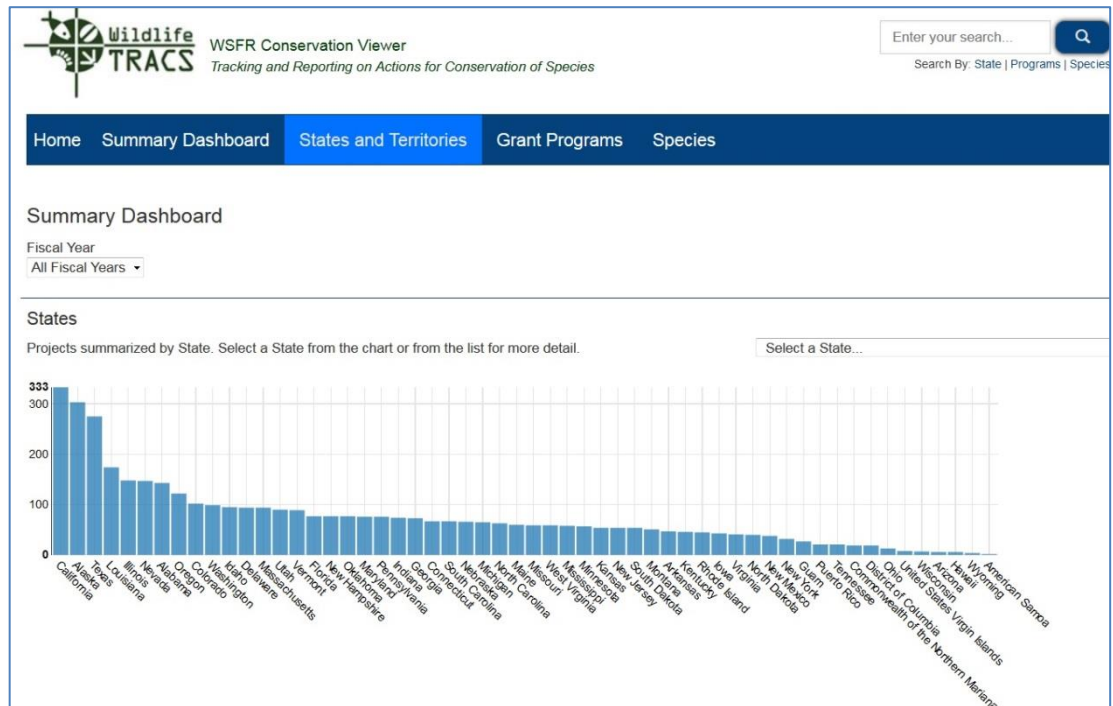
- Here are the results before the fix (erroneously showing other states):



- Here is the result after the fix:



- **Improved accuracy on the Public Conservation Viewer - Summary Dashboard and Public Mapper.** Charts and totals on the summary dashboard by state are now much more accurate. For example California now has a fewer projects displayed (but they are accurate!) because projects in Oregon and Nevada that were previously misrepresented as located in California have been corrected. As with map filters on the main mapper, the map filters for the public mapper are also be more accurate.



- **Location information on reports display more accurately.** This includes more accurate and precise location and county information on all reports (summary reports, proposals, performance reports, etc.). *This does not apply to previously generated PDFs for proposals and performance reports! Those will remain incorrect unless re-generated by a user.*

## Land Record Form

Several fields were updated or debugged on the Land Form used for land and water rights acquisitions. Fixes and updates include:

- The Land Form is now available when the action strategy is Water Rights Acquisition or Land Acquisition. (Note: it is not required or available for the action strategies of "Conservation Area Designation" or "Private Lands Agreements").
- Land form Contacts no longer require an email address and phone number. The field has been converted to free text to provide more flexibility and protect against privacy information.
- Address lookup fields have been debugged. The "Land Seller" and "Deed Recording Address" fields have been converted to free text fields.

- The "Encumbrances" box is no longer checked by default or required.
- Bug fixes allow proper saving/loading of "Interest Type", "Titled To" and "Acre/Feet" fields.
- The "Assessor Parcel Number" field was converted to a free text field.
- The percentage deviation on deeded acres is rounded to avoid confusion near 0.5%. The land form present a warning if the deeded acres fall outside 0.5% of the polygon acres but the user can save the form and continue.
- The "estimated costs" tab on the Land Record form can now be left blank or it will accept \$0. You can now submit a performance report with \$0 entered on the Project Estimated Costs form as well.
- Land Deeded Acres is now displayed and validated for reporting in "View Addressed Objectives" (i.e. if the deeded acres do not match the polygon acres within 0.5% tolerance range, an error message will display).

The screenshot shows a web application window titled "Lands Record: #1960309717 Action #1960309708". The form has tabs for "Properties", "Costs", "Location", "Contacts", and "Comments". A yellow warning banner at the top states: "Deeded Acres is outside the standard error tolerance (0.5%) compared to the Polygon Acres. Reconciliation is required before the action is reportable." The form fields include:

- Property Name: Text input with value "Test".
- Transaction Type: Dropdown menu with value "Acquisition".
- Transfer Type: Dropdown menu with value "Cash".
- Interest Type: Dropdown menu with value "Fee Simple".
- Deeded Acres: Text input with value "15220". Below it, "Polygon Deviation: 8.980%".
- Polygon Acres: Text input with value "13965.13 acres".
- Acre Feet: Text input.
- Instrument Number: Text input.
- Closing date: Date input with value "04/01/2016".
- Federal Record ID: Text input.
- State Record ID: Text input.
- Assessor Parcel Number: Text input.
- Deed Book Number: Text input.
- Deed Recorded Date: Date input.
- Deed Recording Address: Text area.
- Encumbrances?: Check box with value "Yes".

At the bottom, there are "Save" and "Close" buttons.

## Sensitive Project Designation

- Projects marked as sensitive no longer display the acreage values of the buffered shape. Now the real acreage displays in both the net action area and deeded acres validation. *Note: Reports previously generated from TRACS (including the Proposal, Summary and Performance Reports) still display the buffered shape acreage and location information until the report is regenerated.*
- Projects marked "Sensitive" no longer appear in the Conservation Viewer due to security considerations. This issue will be further addressed in the 2017 enhancement.

## Miscellaneous Updates

- When creating a new project statement, information about the statement is immediately available for map filters. Previously it was only available after submitting the statement for review.
- A full audit of all fields/filters is completed, and map filters should work much more reliably.
- Funding Source searching improved by narrowing the list by state/region.
- FBMS Reports format fixes make it easier/faster to load and download reports in TRACS (including improved partial name matching and report download available from Firefox).